Essential Components:

Data-Based Decision Making & Problem Solving

Essential Components

TIERS 2 & 3

Ongoing Cycle: Instruction, Assessment and Student Goals

Four Types of Assessment

- **Screening**- Involves all children and is usually done at set benchmark points such as the beginning and middle of the school year or the end of a unit in a core program.

- **Diagnostic-** Helps teachers plan instruction by providing in-depth information about students' skills and instructional needs.

- **Progress Monitoring-** Involves frequent measurement to determine if students are making adequate progress or are in need of more intervention to achieve grade-level reading outcomes.

- **Outcome-** Provides a bottom-line evaluation of the effectiveness of the reading program in relation to established performance levels (e.g., end of school year).

Each sticky note has student's name, teacher and score

Intensive

Strategic

Benchmark
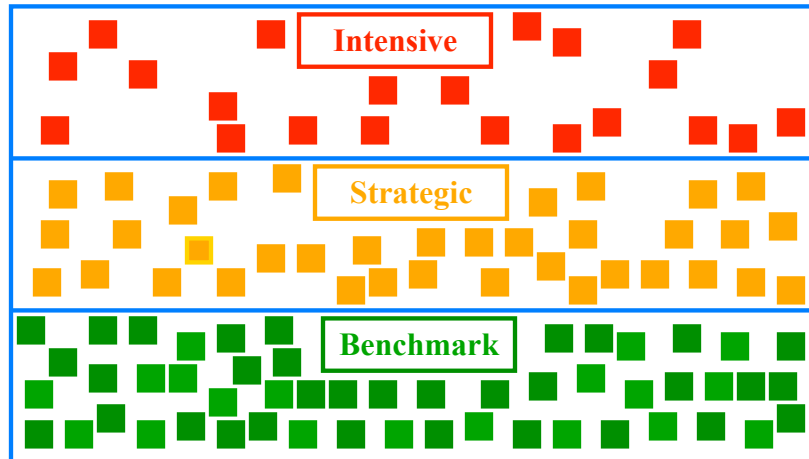
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Benefits of Problem Solving

✓ Systematically Defines Levels of Need within a School

✓ Addresses Academic and Behavioral Problems

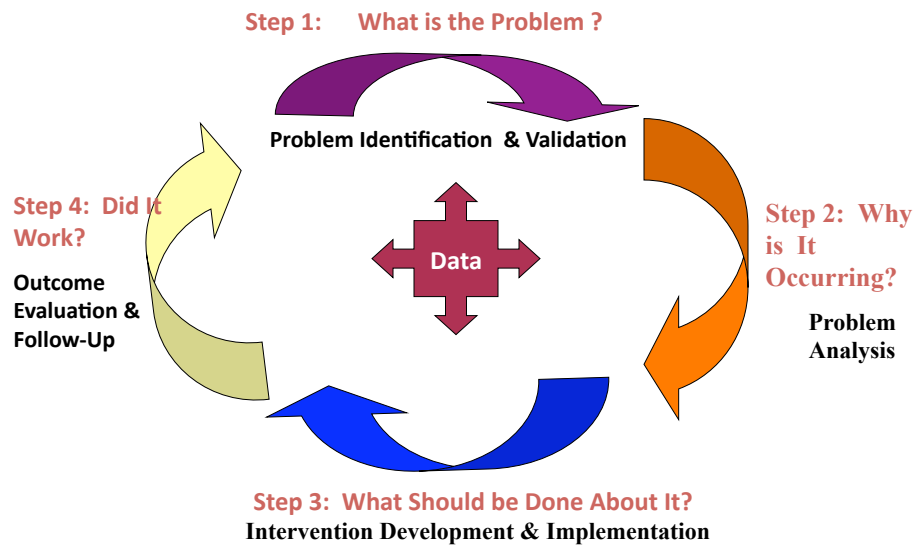✓ Utilizes Research-Based Methods to Deliver Evidence-Based Interventions

Problem Solving

**4   Key Questions to Ask …
and Answer!**

The 4   Questions and 4 Steps
in Problem Solving

Step 1:   What is the Problem ?

Problem Identification & Validation

Step 4: Did It Work?

Outcome Evaluation & Follow-Up

Data

Step 2: Why is It Occurring?

Problem Analysis

Step 3: What Should be Done About It?
Intervention Development & Implementation

The 4 Steps of Problem Solving

1) Define the problem

2) Analyze the problem

3) Generate solutions and Implement a plan

4) Evaluate outcomes

Step One: Define the Problem

A problem is when we have a difference between what is expected and actual performance – academic, behavior, etc.

Step 1: What is the Problem?

Problem Identification & Validation

—Expectation versus current performance

  Identify & validate the "discrepancy"

—Select appropriate measurement –
  • Define "problem" in terms that are
    –objective
    –observable
    –measurable
  • Measurement precision pivotal to progress monitoring, goal setting, and outcome evaluation

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RTI Case Study: Josie

Josie is a 4th grade student at Jefferson Elementary

Benchmark Screening Results
  – Fall DIBELS ORF Screening score is 46 CWPM
  – The end-of-year target is 118 CWPM
  – There are 26 weeks left in the school year

The 4 Steps of Problem Solving

1) Define the problem

2) Analyze the problem

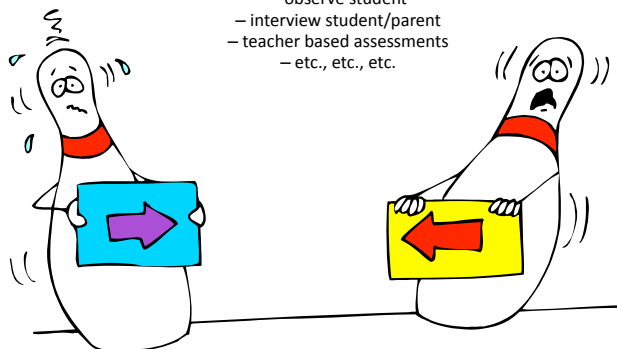3) Generate solutions and Implement a plan
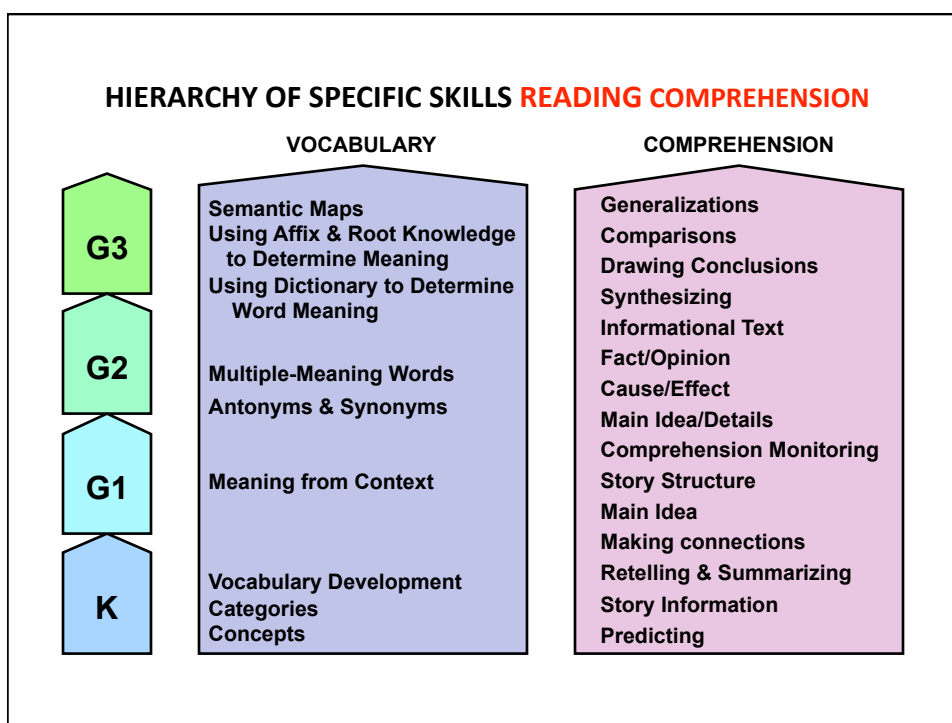
4) Evaluate outcomes

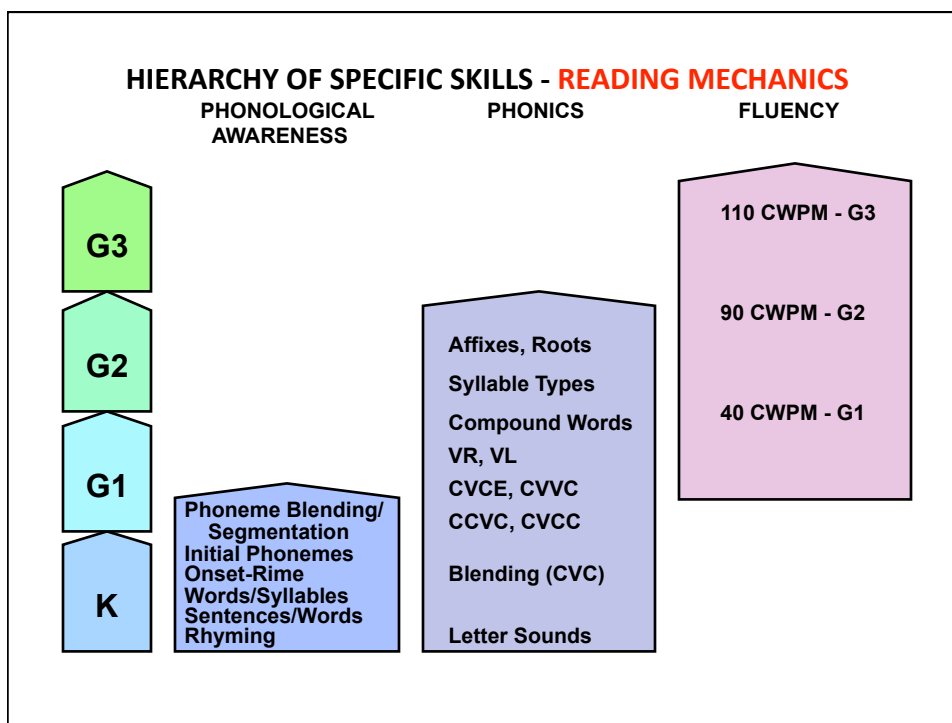
Step 2: Analyze the Problem

WHY it is happening?

- "Can't do" vs "Won't do" ?
- Teaching and/or Practice Issue?
- Pre-requisite/Tool Skill Issue?

– observe student
– interview student/parent
– teacher based assessments
– etc., etc., etc.

HIERARCHY OF SPECIFIC SKILLS - READING MECHANICS

PHONOLOGICAL AWARENESS   PHONICS   FLUENCY

G3

G2

G1

K

110 CWPM - G3

90 CWPM - G2

40 CWPM - G1

Phoneme Blending/ Segmentation
Initial Phonemes
Onset-Rime
Words/Syllables
Sentences/Words
Rhyming

Affixes, Roots
Syllable Types
Compound Words
VR, VL
CVCE, CVVC
CCVC, CVCC

Blending (CVC)

Letter Sounds

HIERARCHY OF SPECIFIC SKILLS READING COMPREHENSION

VOCABULARY   COMPREHENSION

G3

G2

G1

K

Semantic Maps
Using Affix & Root Knowledge
  to Determine Meaning
Using Dictionary to Determine
  Word Meaning

Multiple-Meaning Words
Antonyms & Synonyms

Meaning from Context

Vocabulary Development
Categories
Concepts

Generalizations
Comparisons
Drawing Conclusions
Synthesizing
Informational Text
Fact/Opinion
Cause/Effect
Main Idea/Details
Comprehension Monitoring
Story Structure
Main Idea
Making connections
Retelling & Summarizing
Story Information
Predicting

Four Types of Assessment

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- **Diagnostic-** Helps teachers plan instruction by providing in-depth information about students' skills and instructional needs.

- **Progress Monitoring-** Involves frequent measurement to determine if students are making adequate progress or are in need of more intervention to achieve grade-level reading outcomes.

- **Outcome-** Provides a bottom –line evaluation of the effectiveness of the reading program in relation to established performance levels (e.g., end of school year).

The 4 Steps of Problem Solving

1) Define the problem

2) Analyze the problem

3) Generate solutions and Implement a plan

4) Evaluate outcomes

Step 3: Generate solutions and Implement a plan

- Write a Goal
- Brainstorm Interventions
- Develop a Plan
- Implement the Plan

Step 3-A: Write a Goal
"What is the Goal?"

- The goal is the intended outcome of the intervention; the direction and extent to which the target behavior is to be changed.

- It takes into account a student's present level of performance (PLOP)
- Precedes & defines the system of monitoring progress

Benefits of Goal Writing

- Determines whether the individual is making improvement
- Guides decision-making relative to intervention activities
- Determines the relative effectiveness of an intervention or instructional program

X ➜ **Y**

General Characteristics of Acceptable Goals......

- Are SMART

- **S**pecific
- **M**easurable
- **A**mbitious
- **R**ealistic
- **T**ake into account the Gen Ed curriculum

A Goal Statement Should Include:

- **Conditions** – time frame, setting, materials

- **Student's Name**

- **Behavior** – What we expect

- **Criterion** – standard for expected performance

Goal Setting Activity

As a team write a goal for Josie:

- Conditions (time frame, materials, setting)
- Student's Name
- Behavior (what we expect)
- Criterion (standard for expected performance)

RTI Case Study: Josie

Josie is a 4th grade student at Jefferson Elementary

Benchmark Screening Results
– Fall DIBELS ORF Screening score is 46 CWPM
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– There are 26 weeks left in the school year

Josie's Goal

- Conditions (time frame, materials, setting)
- Student's Name
- Behavior (what we expect)
- Criterion (standard for expected performance)

Goal:

By the end of 4th grade, using 4th grade CBM reading probes, Josie will read orally at a median rate of 118 words correct/minute, with 3 or fewer errors, for 2 consecutive weeks.

How many words per week will Josie need to increase to meet her goal?

Formula for Goal Setting

End-of-Year Target - Current Score = Overall Target

Overall Target   = Weekly
Number of Weeks left of school   Target

Formula for Goal Setting

End-of-Year Target – Current Score =Overall
                                    Target

118 – 46 = 72

<u>Overall Target</u>   = Weekly
Number of Weeks left of school   Target

<u>72</u> = 2.8 words per week
26

Is this Goal SMART?

Specific- Yes, 118 words

Measurable- Yes, through progress monitoring

Ambitious- Yes

Realistic- ?????

Take into account the Gen Ed curriculum- Yes

Oral Reading Fluency Weekly Progress
(Fuchs, Fuchs, Hamlett, Walz & German, 1993)

	Average Words pr wk Improved	Minimum progress	Maximum progress
Grade 1	2.10	.35	4.97
Grade 2	1.46	.71	4.00
Grade 3	1.08	.43	2.43
Grade 4	.84	.47	1.41
Grade 5	.49	.04	1.12
Grade 6	.32	-.22	.97

Step 3-2: Generate Solutions

Solutions must be specifically designed to target the reason (function) for the academic and/or social behavior.

Brainstorm solutions!

MISSING

CALL
1-800-BOW-LANE

MISSING

CALL
1-800-PIN-KING

What does your team think of your goal now?

Brainstorm Solutions

Brainstorm Interventions

- Interventions are:

  – Linked to a GOAL: the behavior/performance will change relative to the goal set by the team.
  – Systematic/Planned: the procedures to be applied are specified clearly and completely
  – Environmentally Focused: the actions taken modify the environment, not *only* upon the student

Some Examples of Interventions:

- Using Corrective Reading
- Teaching student how to initiate peer interaction
- Instructing in following directions
- Using strategies for sentence writing
- Teaching strategies for test taking
- Systematically providing positive reinforcement for correct behavior

Interventions are not……..

- Accommodations
- Adaptations
- Interagency referrals
- Special education settings
- Assessments, evaluations, screenings
- Classroom observations
- Advice or consultations
- Assisting with instructional methods and materials
- Places

Identify the interventions……

- Student attends Mrs. Carr's afternoon reading intervention group for 30 minutes each day.
- Student participates in one Corrective Reading lesson each day.
- Teacher requests the student be evaluated for ADD
- Student is referred for testing with the psychologist
- Student is observed in the classroom
- Student is reinforced for sitting in her seat
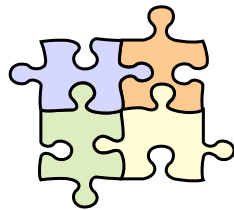
Essential Components

TIER 2 & 3 EVIDENCE-BASED INTERVENTIONS

The Essential Pieces:
2 X 2 Foci in RTI Process

	Curriculum & Instruction	Ongoing Assessment
School Level	•Strong research based C&I in place •Uninterrupted instructional time block across school •Instructional groups based on performance levels	•School wide screening 3 times yearly (F,W,S): •Evaluate C&I effectiveness •Identify "learning enabled" & "at risk" •Reorganize instructional groups
Student Level **Tier 2 &3**	•Supplemental & Strategic C&I in place •Additional Instructional time set and flexible (dosage)	•Progress monitoring measures in place and scheduled according to intensity of C&I •Assess intact & needed skills •Assess additional factors •Systematic review of data to inform intervention

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Based on Tiers of Academic/Behavioral Instruction that Support Success

Tier 1 : Core Classroom Instruction – Universal (All)
- Instruction for ALL students
- 8 0-90 % of student population will respond successfully

Tier 2: Strategic Targeted Intervention- Secondary (Some)
- Targeted Instruction addressing specific needs of students
- 5-10 % of student population will need additional supports for success

Tier 3 : Intensive Targeted Intervention – Tertiary (Few)
- Intensive Targeted Instruction for the most at-risk students
- 1- 8 % of student population will need intensive supports for success

Tier 2: Strategic Targeted Intervention Instruction

- Targeted Instruction addressing specific needs of students

- 5-10% of student population

**1-8%
Tier 3**

**Tier 2
5-10%**

**Tier 1
80-90%**
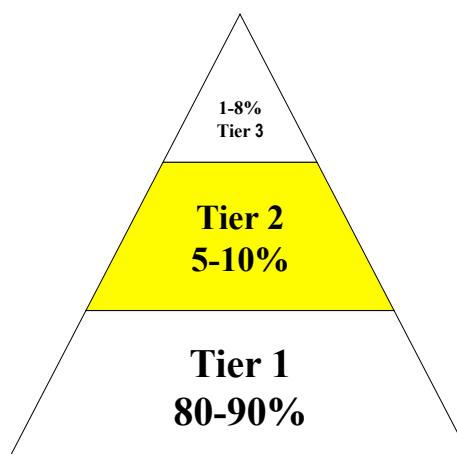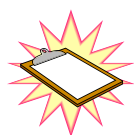
	Tier 2 Instruction/Intervention
Curriculum and Materials	•Evidence-based core curriculum and instructional materials in core subject areas •PLUS •Evidence-based intervention materials and strategies that supplement Tier 1 instruction
Instructional Organization	•Homogeneous groups •Explicit instruction targeting specific skill deficits •Pre-teach and re-teach targeted skills •Opportunities for review, practice, and feedback
Instructor	•Teacher, reading specialist, special education teacher, ELL teacher, speech/language trained to teach programs being taught

Component	Tier 2 Instruction/Intervention
Assessment	•Tier 1 benchmark screening plus •Diagnostic and progress monitoring •Parents informed of student progress on a regular basis
Time	•20 to 60 minutes daily in addition to general classroom Tier 1 instruction
Setting	•General education classroom *or* other appropriate setting
Support	•Home practice and support •Before and after-school programs •Additional tutoring or peer-tutoring to provide practice at school •Parent Training •Use of trained paraprofessionals to provide support to the classroom teacher as he/she provides Tier 2 instruction •Instructional teams such as: literacy team, math team, grade-level team, or student support team •Professional development for all school personnel •Ongoing verification for fidelity of implementation

Based on Tiers of Academic/Behavioral Instruction that Support Success

Tier 1: Core Classroom Instruction – Universal (All)
– Instruction for ALL students
– 80-90% of student population will respond successfully

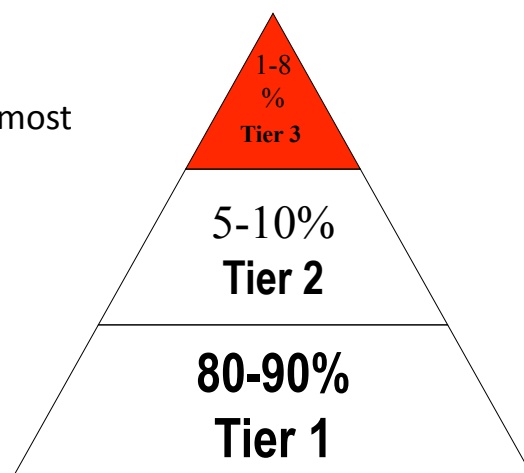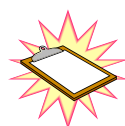**Tier 2: Strategic Targeted Intervention- Secondary (Some)**
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– 1-8 % of student population will need intensive supports for success

Tier 3: Intensive Targeted Intervention Instruction

- Intensive Targeted Instruction for the most at-risk students

- 1-8 % of student population

1-8 %
Tier 3

5-10%
Tier 2

80-90%
Tier 1

	Tier 3 Instruction/Intervention
Curriculum and Materials	•Continue Tier 1 and possibly Tier 2 Instruction •Evidence-based intervention materials and practices that support core curricula and target skill building in core subjects •Programs and strategies emphasize skill building in areas of need as identified through diagnostic assessments. •Replacement of the core program, **when appropriate**
Instructional Organization	•Explicit instruction targeting specific skill deficits •Individual or small, homogeneous groups (2-3) •Pre-teach and re-teach targeted skills •Opportunities for review, practice, and feedback •Use of multi-sensory approaches, as appropriate
Instructor	•Teacher, reading specialist, special education teacher, ELL teacher, speech/language, or other specialist as identified at the local level who has received training to teach programs being taught

Component	Tier 3 Instruction/Intervention
Assessment	•Tier 1 benchmark screening plus •Diagnostic and ongoing progress monitoring (e.g. bi-monthly or weekly) •Parents informed of student progress on a regular basis
Time	•30 to 90 minutes daily *in addition to* Tier 1 classroom instruction; if replacement curriculum is used, 120 mins daily.
Setting	•Appropriate setting within the school
Support	•Instructional teams such as: literacy team, math team, grade-level team, or student support team •Use of trained support personnel to provide practice opportunities •Additional tutoring or peer-tutoring to provide practice at school •Home practice and support •Parent Training •Before and after-school programs •Professional development for all school personnel •Ongoing verification for fidelity of implementation

RTI PILOT SCHOOL	CORE	TIER 2 AND TIER 3 INTERVENTIONS
Roosevelt, Great Falls	Harcourt Reading Program Read/Think Alouds Accelerated Reading	Soar to Success Early Steps Skill Builders
Jefferson, Glendive	Houghton-Mifflin K- 6 Reading Lexical	Lindamood Bell DISTAR Reading Mastery Read Well
Gardiner	McGraw-Hill K-6 Reading Words in Their Way (K -3) Spellography (4 - 6)	LIPPS Wilson Read Naturally
KW Harvey, Ronan	Success for All + (k) K inder Corner (1) Reading Roots (2 - 5) Reading Wings Targeted Treasure Hunts	SFA Tutoring Horizons Fast Track Phonics Corrective Reading

Tier 2 & 3 Targeted Reading Interventions

- Ladders to Literacy (K-1)
- Sound Partners (1-3)
- Road to Code
- Read Well
- Read Naturally
- Horizons
- MANY, MANY More….
- See Web-Based Resources for evidenced based reading interventions

"Standard protocol" vs hybrid interventions

Step 3-C: Develop the Plan

- The RTI team now needs to:
  - Define the "Implementation Component" or What, When, and by Whom?
  - Identify the "Settings" where intervention implementation will occur.
  - Define the "Monitoring Component" or evaluation procedures, schedules, and decision rules they will use.

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"A goal without a plan is just a wish"

The Implementation Component

The implementation component is the record of what the team members need to do in preparation for implementing the intervention plan.

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Writing the Implementation Component

- Decide and record WHAT steps/sequence needs to be taken in order to implement the intervention plan.
- Decide and record WHEN each step needs to be completed.
- Decide and record WHO will be responsible for each step.

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Setting: Where/Context of the Intervention?

- General education setting?
- Special education setting?
- Combination/integrated setting?

- Remember:
  - The setting is determined by the intervention

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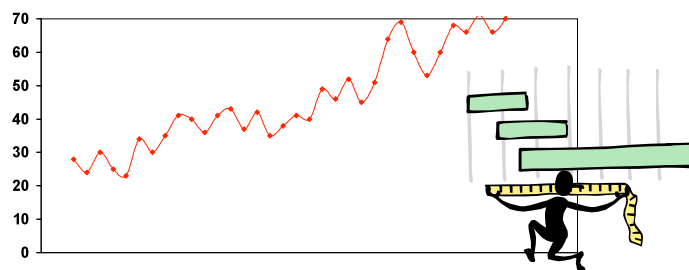
Progress Monitoring

How do we know if the Intervention is working?
AND…
How do we use these data to make decisions?

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How to Monitor Student Progress

- Collect data and GRAPH!

- Benefits of using a graph:
  - Creates a learning picture
  - Allows for decision making
  - Helps predict learning
  - Provides documentation
  - Makes data easier to interpret
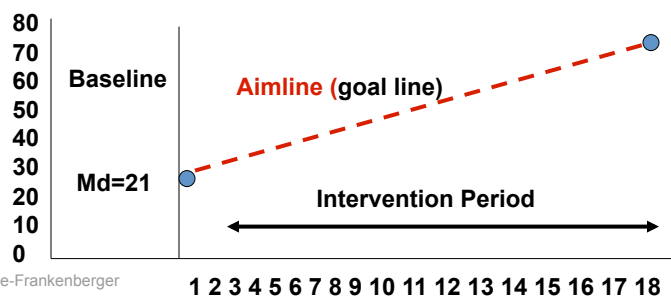
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Progress Monitoring = Indicators of
"Is it working?"

3 data points: Time to consider change

Aim Line

Intervention modified = success!
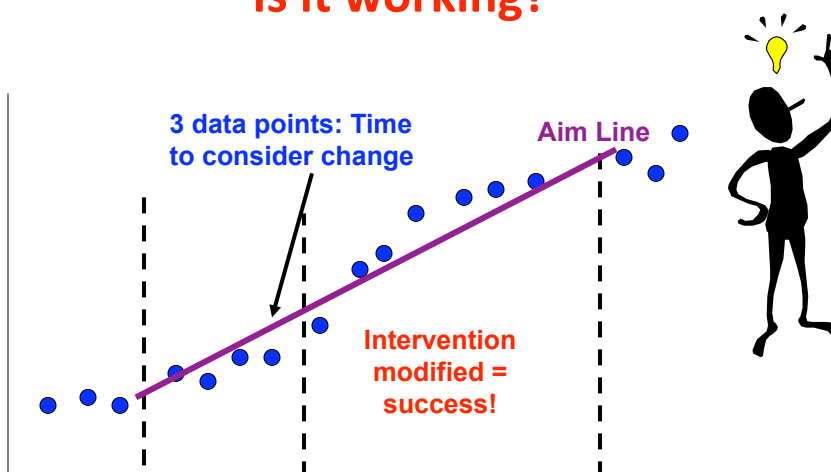
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The "Aimline"

- Shows the expected/predicted rate of learning from your baseline to your goal
- **Goal for Sam:**
- In 18 weeks, when presented with random 2nd grade reading passages, Sam will read aloud at a rate of 73 wpm for 3 of 5 trials.

Baseline

Aimline (goal line)

Md=21

Intervention Period

80 70 60 50 40 30 20 10 0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

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Progress Monitoring Frequency

- Once a week
- Bi-weekly
- Monthly
- Quarterly

- Report progress to parents at least as often as report cards are sent out in regular education classes.

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Step 3-D: Implement the Plan

- •Set a follow-up meeting time
- •Provide staff/student training for intervention implementation
- • Design an observation schedule to monitor/ assist intervention
- •Fidelity measures

The 4 Steps of Problem Solving

1) Define the problem

2) Analyze the problem

3) Generate solutions and Implement a plan

4) **Evaluate outcomes**

Step 4: Evaluate Outcomes
Did It Work?

- Intervention Evaluation and Follow-Up
  - Was problem (discrepancy) resolved?
  - Gather objective evidence (data)
    - Performance levels
    - Treatment integrity
  - Post intervention follow-up
    - Did the performance level maintain?
    - Sustained skills

Things to Consider in
Decision Making

- Focus on the question: "will the student reach his/ her goal by the end of the goal period?"

- Decide to change an intervention whenever the rate of progress falls below the expectation.

- Think of changes in instruction as fine tuning rather than major reconstruction of lessons.

- Use one or two decision making rules.

Decision Rules

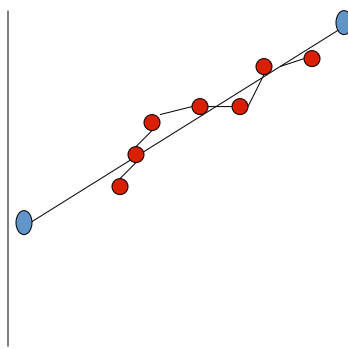If three (3) consecutive data points are *above* the aimline, raise the criteria
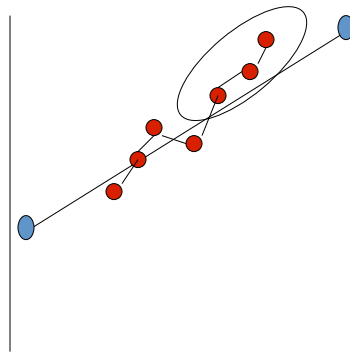
Decision Rules

If three (3) consecutive data points are *below* the aimline, change the intervention (time, group size, or content)
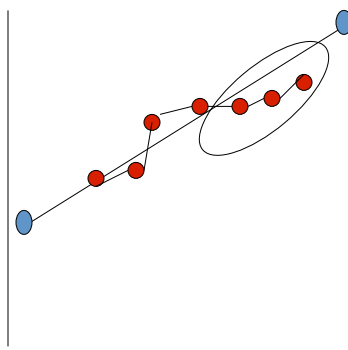
Decision Rules

If neither of the above rules apply, no changes are needed.

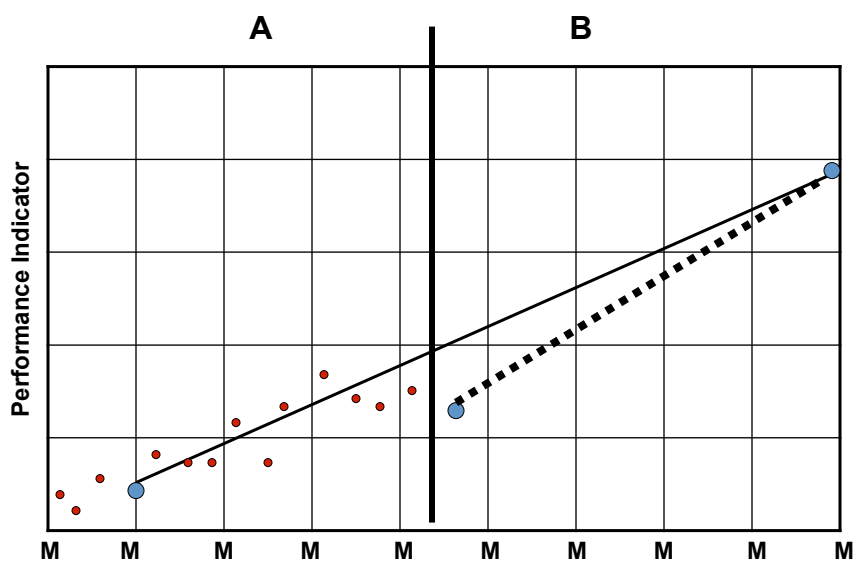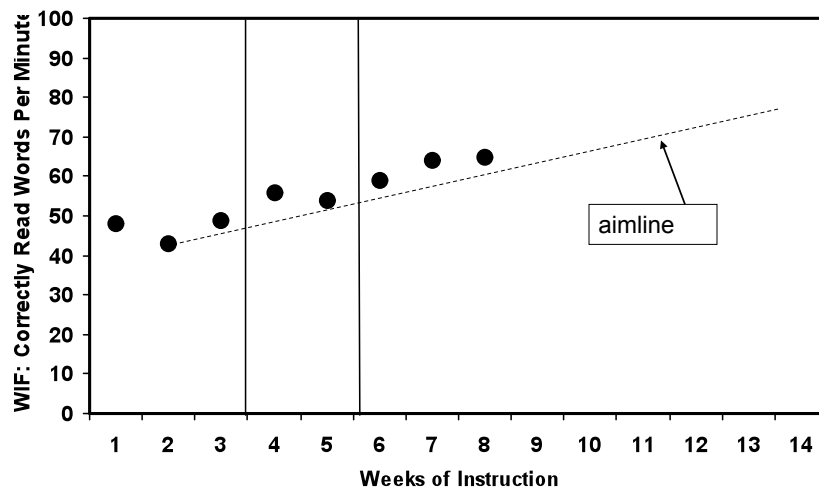Continue intervention as it is, it is working well!

Changes in Intervention

Establish a new aimline

– Find the median of the last 3-5 data points to establish a new baseline. Connect the new baseline median point to the criterion.
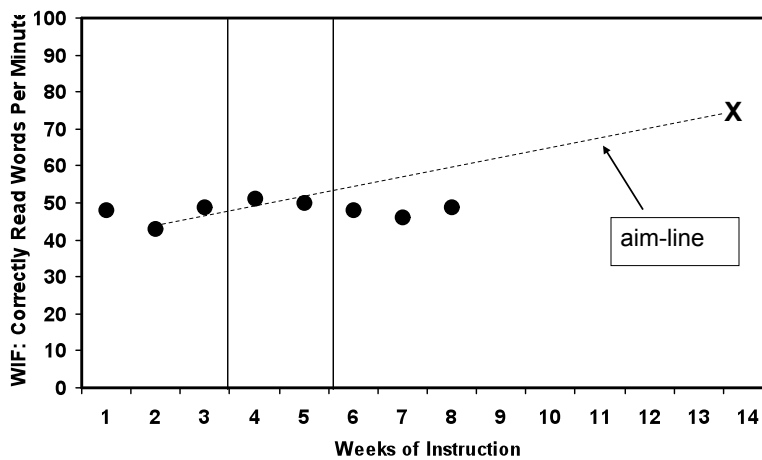
Drawing a New Aimline

Progressing Greater than the Goal – Increase the goal

Not making Progress
Change Intervention
(instruction focus, time, and/or group size)

Time to Discuss & Decide
Data-based Decision Making Activity
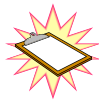
Where are we now?

Are we using progress monitoring tools to track student performance?

Are we using data to create SMART goals for students?

Do we have problem solving processes in place school-wide?

What do we need to do differently?

Talk about potential changes for planning "Next Steps"

Montana Self-Assessment

Data-Based Decision Making